

Minh Thang Cao

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Education

Carleton University

Bachelor of Computer Science

CGPA: 11.64/12 (A+). On Dean's Honour List since 2019.

Ottawa, Ontario, Canada

Sep 2019 – Jan 2024 (Expected)

Experience

Software Engineer Intern

Pattern

May 2022 – Aug 2022

- Designed and developed scalable API services using Express.js + TypeScript + Docker integrated with AWS for data syncing which automates workforce recruitment and management processes (previously manual) by **90%**.
- Applying new design to the Flutter mobile app by creating an internal UI library with reusable widgets.
- Set up automated database migration system on CI/CD pipeline with Docker and Terraform.

Software Engineer Intern

Kinaxis

Sep 2021 – Dec 2021

- Developed an interactive data visualization with D3.js library integrated with TypeScript + HTML environment which enhanced the ability to analyze supply chain allotment data and debug issues, assisted onboard Kinaxis's new developers by providing supply arrangement algorithm's insights.

Software Engineer Intern

Kinaxis

May 2021 – Aug 2021

- Investigated and implemented in C++ a product cycle detection graph algorithm that combines variances of strongly connected components and cycles enumeration algorithms to enhanced supply planning outputs for over 200 global enterprises.
- Improved the running time of the platform in cycles detection from more than 12 hours to 1 second on a customer data set, produced high-quality and more detailed cycle data compared to the previous version.

Volunteer Front-end Developer

CU Blueprint

Sep 2020 – Aug 2021

Beneficent CRM 

- Developed a CRM full-stack web application for a non-profit organization that significantly improves the processing time of their services by migrating to software-automatic workflow.
- Collaborated with developers and designers in an Agile team, building a user-friendly and responsive user interface with reusable components using React + TypeScript and CSS that integrates with Node.js server.

Undergraduate Research

Carleton University

May 2020 – Aug 2020

Closest-pair Doubling 

- Explored a divide-and-conquer algorithm that calculates the closest-pair distance of points on multi-dimensional spaces without knowing coordinates using the doubling dimension definition.
- Implemented from scratch with C++, analyzed and proved the algorithm's logarithmic running time in practice by analyzing the output data and successfully led the original research project to a conclusion.

Teaching Assistant

Carleton University

Sep 2020 – Apr 2022

- Participated in engaging tutorial sections to help professors guide more than 2000 students through materials of Computer Science courses, graded and provided detailed feedback for students' assignments and tests.
- Holding weekly office hours to answer questions and help students improve their understanding of the materials.

Projects

Online

Python, Flask, JavaScript, HTML, CSS, Jinja2, Socket.IO, SQLAlchemy, PostgreSQL

- Built an online real-time Go game using Flask with Jinja2 template integrated with Socket.IO.
- Designed the SQL data models with SQLAlchemy and stored data in a PostgreSQL database.

Connect 4

JavaScript, React, HTML, CSS, Node.js, Express.js, Socket.IO, MongoDB

- Developed a full-stack web game using the MERN stack technologies with React responsive user interface and Node.js RESTful API endpoints that process queries efficiently.

Skills

Languages: Python, JavaScript, TypeScript, C/C++, Java, Kotlin, HTML, SQL

Technologies: React, Node.js, React Native, Express.js, Flask, Flutter, CSS, Git, AWS, Linux